

A revision of the *Melittia* types (Lepidoptera, Sesiidae) kept in the Hope Entomological Collections, Oxford University, UK

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Abstract. The type specimens of the seven taxa of the clearwing moth genus *Melittia* Hübner, [1819], namely, *M. astarte* (Westwood, 1848), *M. chrysogaster* Walker, [1865], *M. humerosa* Swinhoe, 1892, *M. phorcus* (Westwood, 1848), *M. rutilipes* Walker, [1865], *M. siamica* Walker, [1865] and *M. strigipennis* Walker, [1865] deposited in the Hope Entomological Collection of the University Museum, Oxford University, Oxford, England, are revised and illustrated. The last species is restored from a synonym of *M. eurytion* (Westwood, 1848). *M. humerosa* is cited as a synonym of *M. sangaica* Moore, 1877. The brief discussion of the type species of the genus *Melittia* is presented.

Key words Sesiidae, *Melittia*, *M. astarte*, *M. chrysogaster*, *M. humerosa*, *M. phorcus*, *M. rutilipes*, *M. sangaica*, *M. siamica*, *M. strigipennis* sp. rev., taxonomy, Oriental region.

The genus *Melittia* Hübner, [1819] consists of numerous mostly brightly coloured and superficially distinct appearing species. Unfortunately, most of them have been, in the past up to the beginning of this century, described on a single or a few specimens. Their original descriptions are very laconic. The descriptions contain, as a rule, only a few external characters. This considerably hampers the study of these beautiful clearwing moths. In addition, very important data about the types, type localities, etc., are scattered among numerous books and periodicals, which in many cases are rare and nearly unavailable.

This paper, a continuation of our ongoing studies of the Oriental Sesiidae, is a revision of the types of seven *Melittia* taxa from the Oriental region, which are housed in the Hope Entomological Collections, Oxford University, England. The specimens were kindly sent to us for study by Dr I. Lansbury. Four of them, viz. *chrysogaster*, *rutilipes*, *siamica* and *strigipennis*, were described by Walker ([1865]), two, *astarte* and *phorcus*, by Westwood (1848), and *humerosa* by Swinhoe (1892). As a result of our revision of these *Melittia* taxa, we conclude that six of them are distinct and valid species, including *M. strigipennis*, previously always cited as a synonym of *M. eurytion* (Westwood, 1848). *M. humerosa* is, as indicated recently (Spatenka *et al.*, 1993), a synonym of *M. sangaica* Moore, 1877.

Up-to-date information regarding these seven *Melittia* taxa are presented, including illustrations of the adults and genitalia, the main bibliography, redescriptions and diagnosis. Material examined or cited herein has been deposited in the following collections, abbreviated in the text as follows:

UMO—University Museum, Oxford University, Oxford, England.

BMNH—The Natural History Museum, London, England.

Before going further, we must briefly discuss the question of the type species of the genus,

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because until now there was no unanimity among authors. The genus *Melittia* was originally described by Hübner, [1819], with the type species *Melittia anthedoniformis* Hübner, [1819], which was considered to be proposed as an objective replacement name for *bombylifomis* Cramer, 1782 (*sensu* Hübner = *Sphinx bombylifomis* Stoll, 1782) (Fig. 17). The latter species was in fact described by Stoll in Cramer under two different spellings: *Sphinx bombiliformis* on page 241 and *Sphinx bombylifomis* on page 248. According to the International Code of Zoological Nomenclature (Article 58 (2)), these two names are identical no matter which of them is adopted, and are junior homonyms of *Sphinx bombylifomis* Linnaeus, 1758 (Lepidoptera, Sphingidae) and invalid for the sesiid in question. On the other hand, Hampson (1892) treated *M. bombylifomis* Stoll, 1782 as a synonym of *M. chalciformis* (Fabricius, 1793) without any comments. After that Bartel (1912) indicated that *M. chalciformis* is a synonym of *M. bombylifomis*, and Le Cerf (1917) stated that *M. chalciformis* might be the same species as *M. bombylifomis*. Consequently, information about the type species of *Melittia* should be cited in the following way.

***Melittia* Hübner**

Melittia Hübner, [1819]: 128. Type species: *Melittia anthedoniformis* Hübner, [1819] = *Sphinx bombylifomis* Stoll, 1782 = *Sphinx bombiliformis* Stoll, 1782 (not *Sphinx bombylifomis* Linnaeus, 1758); = *Sesia chalciformis* Fabricius, 1793. By monotypy. Oriental region.

Remarks. We intentionally do not cite the numerous synonyms of the genus *Melittia* proposed or mentioned by the previous authors (*e. g.* Heppner & Duckworth, 1981, Spatenka *et al.*, 1993). We believe all these taxa are in need of a substantial revision.

***Melittia phorcus* (Westwood) (Figs 1-4, 20, 24)**

Trochilium phorcus Westwood, 1848: 62, pl. 30, fig. 7665. Type locality: "Central India". Holotype female (UMO).

Melittia phorcus Westw.: Hampson, [1893]: 204 (as a synonym of *M. chalciformis* (Fabricius, 1793)).

Trochilium (= *Melittia*) *phorcus* Westw.: Le Cerf, 1917: 180.

Melittia phorcus Westw.: Hampson, 1919: 88 (as a synonym of *M. bombylifomis* (Cramer, 1782)).

Melittia phorcus Westwood: Dalla Torre & Strand, 1925: 147.

Melittia phorcus Ww.: Gaede, 1933: 789 (as a synonym of *M. bombylifomis* (Cramer, 1782)).

Melittia phorcus (Westwood, 1848): Heppner & Duckworth, 1981: 27.

Redescription. Female (holotype) (Fig. 1). Alar expanse 32.0 mm; body length 15.8 mm; forewing 14.0 mm; antenna 7.3 mm. Head: antenna dorsally black with violet sheen, ventrally dark brown to black with violet sheen, with a short pale yellow stripe both basally and subapically; pedicellus yellow ventrally; frons grey-brown with purplish sheen, with a yellow stripe laterally; labial palpus pale yellow with individual, black, hair-like scales ventrally; vertex mixed with grey-brown and yellow scales; pericephalic hairs light brown-orange mixed with black. Thorax: patagium dirty light brown-orange dorsally and yellow laterally; tegula dirty light brown-orange; scales of meso- and metathorax lost; thorax laterally mixed with grey-brown with purplish sheen, yellow to pale yellow and a few orange scales. Legs: fore coxa pale yellow to yellow with a few grey-brown scales distally; hind tibia internally dark brown to black, externally with yellow and brown-orange scales, with a small white spot both somewhat near base of mid spurs and at base of apical spurs; spurs dark brown to black; hind tarsus dark brown to black with admixture of yellow and a few light brownish and white scales on two basal tarsomeres externally. Abdomen: dorsally dark brown to black with purple-violet sheen, with a few, thin, yellow scales; tergites 1 and 2 each densely covered with light brown-orange scales; tergites 2-4 each with a narrow yellow margin

distally, tergites 5 and 6 each with a narrow, white, distal margin; ventrally dark brown with a large, diamond-shaped, white spot through tergites 3-6; anal tuft small, dark brown, mixed with white scales distally.

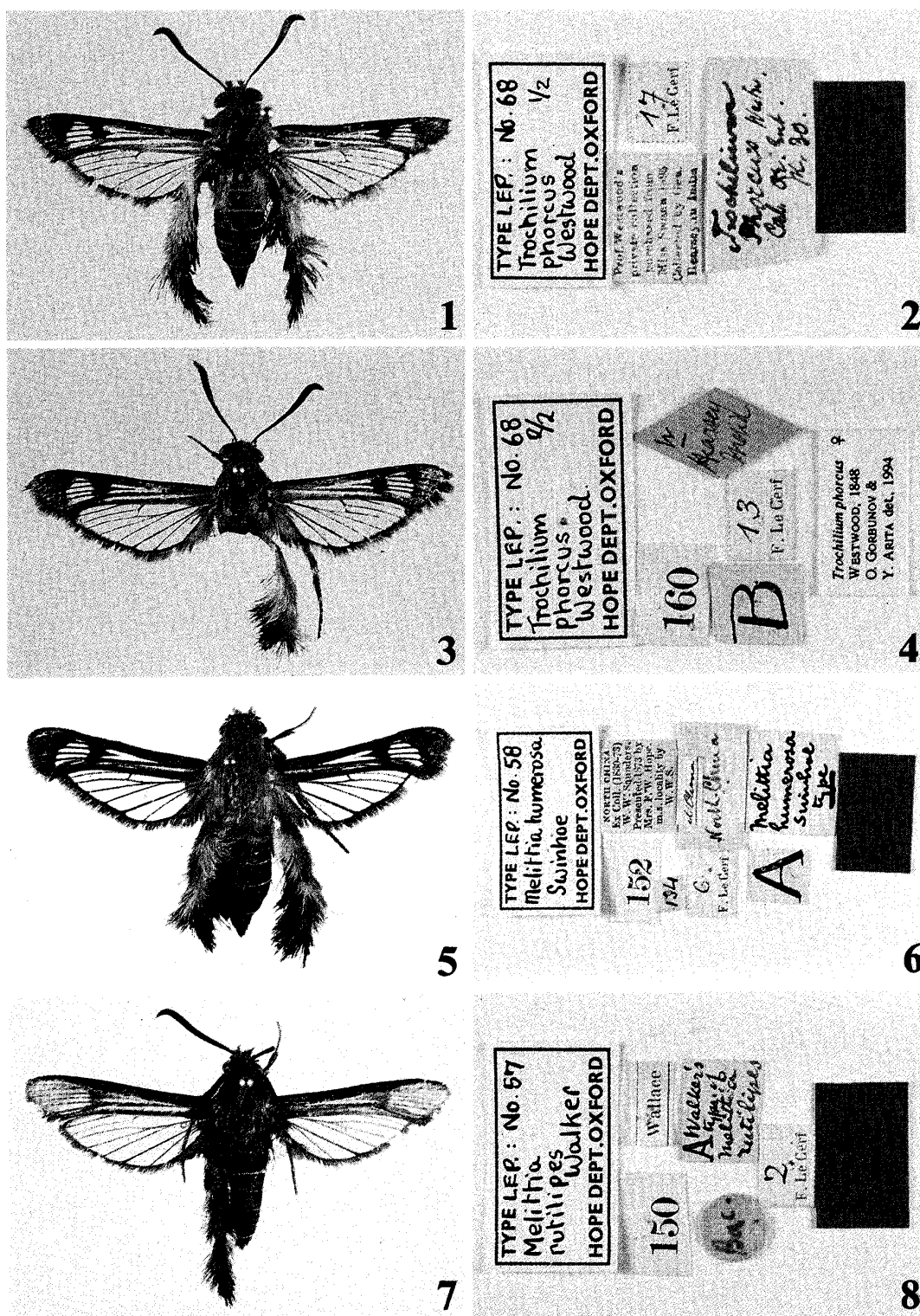
Forewing: costal and anal margins and Cu-stem dark brown to black with admixture of thin, dirty, light brown-orange scales; apical area dark brown with purplish sheen, with a few individual, snow-white scales; discal spot broad, with a long, narrow, cuneiform projection proximally, dark brown with a few dirty orange scales at margins; transparent areas well-developed; anterior transparent area divided into two, longitudinal, hyaline stripes by a projection of discal spot; external transparent area with dirty orange scales at margins, narrowed costally, divided into 5 cells, on level of vein M_1 about 1.7 times as narrow as apical area; cilia grey-brown. Hindwing: transparent, anal area opaque, dirty orange with golden sheen; veins, discal spot and outer margin dark brown to black; discal spot narrow; outer margin about twice narrower than cilia; cilia grey-brown.

Female genitalia (holotype, genital preparation No. GA-088) (Figs 20, 24). Papillae anales slightly sclerotized, covered with relatively short setae; 8th tergite relatively broad with relatively short setae at distal margin and with a long seta at inner margin ventrally; both apophyses nearly equal in length, anterior apophyses with a long, narrow appendix baso-ventrally; ostium bursae opening near posterior margin of 7th sternite, slightly funnel-shaped, narrowly well-sclerotized; antrum narrow, membranous; ductus bursae narrow, relatively long, membranous; corpus bursae ovoid, membranous with signum relatively small, narrowly pear-shaped, with about ten transverse, rather well-sclerotized, dentate stripes anteriorly, bifurcate posteriorly (Fig. 24).

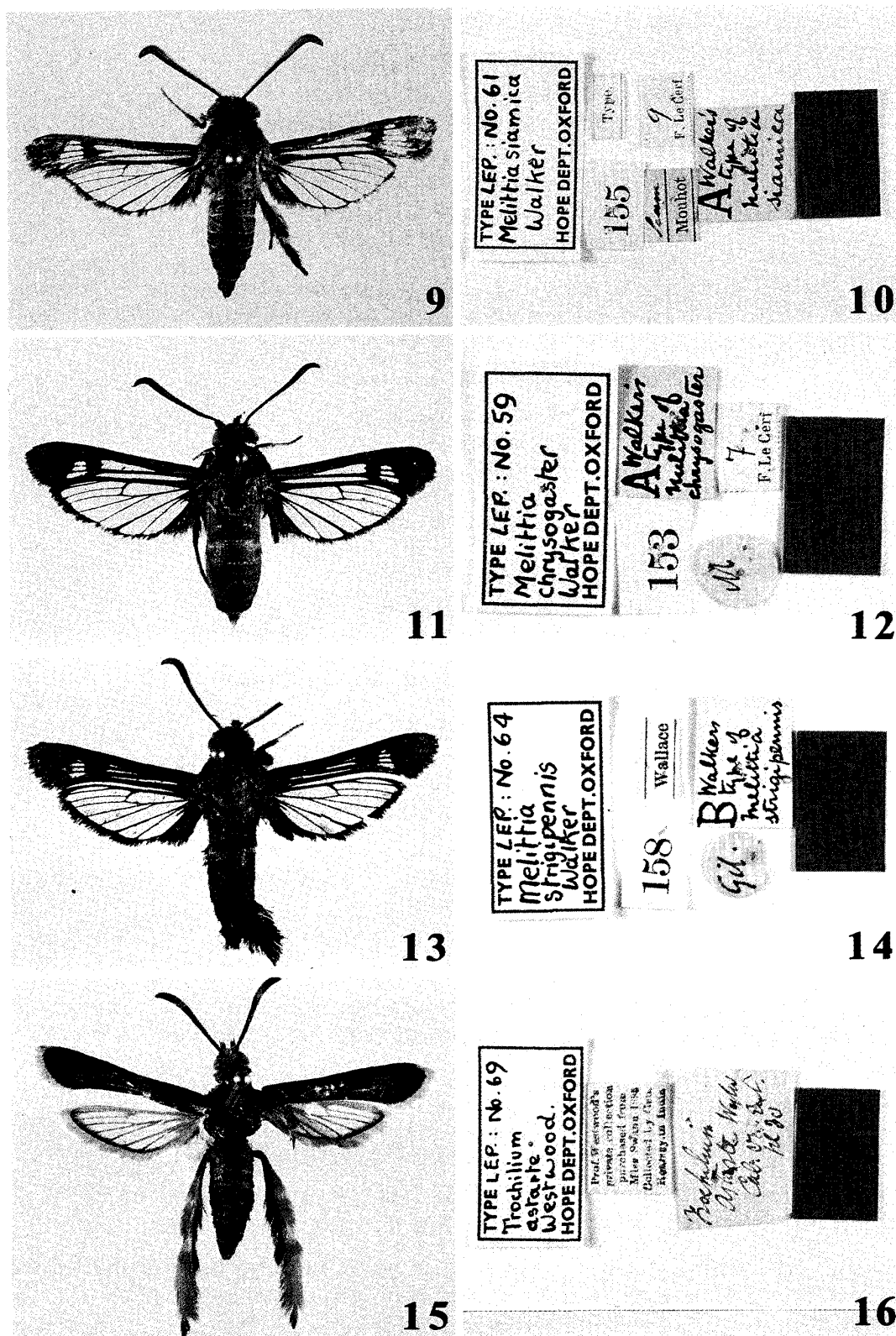
Male. Unknown.

Variability. The second female specimen of this species with broken abdomen, which we have studied, has the antenna with a few yellowish scales dorsally only, but it is somewhat larger: alar expanse 36.0 mm; forewing 16.0 mm; antenna 7.5 mm.

Diagnosis. This species seems to be closest to *Melittia chalciformis* (Fabricius, 1793), *M. dichroipus* Hampson, 1919, *M. leucogaster* Hampson, 1919, *M. notabilis* Swinhoe, 1890 and *M. sangaica* Moore, 1877. Superficially, it can be distinguished from the first species by the coloration of the hind leg tuft (more white scales externally in *chalciformis*) and by the shape and size of the external transparent area of the forewing (divided into 4 cells only, smaller, about 2.5-3.0 times narrower than apical area on level of vein M_1 in the species compared). From *dichroipus*, *phorcus* is distinguishable by the coloration of the frons (entirely white to pale yellow in *dichroipus*), thorax (darker in *dichroipus*) and hind leg (darker, with yellow and black, but without brown-orange scales in the species compared), and by the size and shape of the external transparent area of the forewing (rounded apically, broader, about 1.7 times broader than apical area on level of vein M_1 in *dichroipus*). From *leucogaster*, *phorcus* differs in the size of the external transparent area of the forewing (divided into 4 cells, small, on level of vein M_1 about 3 times narrower than apical area in *leucogaster*) and coloration of the forewing (darker, with less numerous dirty orange and light brown-orange scales in the species compared). From *notabilis*, it can be separated by the coloration of the hind leg tuft (darker in *notabilis*). From *sangaica*, *phorcus* is distinguishable by the coloration of the hind leg (with more numerous brown-orange or orange scales in *sangaica*) and shape of the discal spot and anterior transparent area of the forewing (discal spot with a relatively short cuneiform projection proximally, so anterior transparent area not divided into two longitudinal stripes in the species compared). By the female genitalia, this species can be easily separated from *chalciformis* and *sangaica* (the genitalia of the other species



Figs 1-8. *Melittia* spp. 1-4. *M. phorcus* (Westwood, 1848). 1. Holotype, female (UMO). Alar expanse 32.0 mm. 2. Ditto, labels. 3. Female (UMO). Alar expanse 36.0 mm. 4. Ditto, labels. 5-6. (*M. sangaica sangaica* Moore, 1877)=*M. humerosa* Swinhoe, 1892. 5. Holotype, female (UMO). Alar expanse 39.0 mm. 6. Ditto, labels. 7-8. *M. rutilipes* Walker, [1865]. 7. Holotype, female (UMO). Alar expanse 35.0 mm. 8. Ditto, labels.



Figs 9-16. *Melittia* spp. 9-10. *M. siamica* Walker, [1865]. 9. Holotype, male (UMO). Alar expanse 26.0 mm. 10. *Ditto*, labels. 11-12. *M. chrysogaster* Walker, [1865]. 11. Holotype, female (UMO). Alar expanse 35.0 mm. 12. *Ditto*, labels. 13-14. *M. strigipennis* Walker, [1865]. 13. Holotype, male (UMO). Alar expanse 35.0 mm. 14. *Ditto*, labels. 15-16. *M. astarte* (Westwood, 1848). 15. Holotype, female (UMO). Alar expanse 25.5 mm. 16. *Ditto*, labels.

Zweyte Familie, Familia B.

Schlängliche, Graciles.

Der Leib ziemlich dünn, und die Schwingen sehr schmal.

1. Verein, Coitus 1.

Paranthrenen, Paranthrenae.

Die Schwingen ganz dicht beschüpft; der Wanß ungleich gelbgeringt.

1370. Paranthrene Rhingiaeformis. Hüb. Sph. 41.

1371. P. Asiliformis Schiff. Verz. Sph. F. 9. Hüb. Sph. 44.

1372. P. Tineiformis. Hüb. Sph. 46.

1373. P. Brosiformis. Hüb. Sph. 116.

2. Verein, Coitus 2.

Melittien, Melittiae.

Die Schwingen theils, die Senten ganz durchsichtig; die Füße sehr buschig behaart.

1374. Melittia Anthedoniformis. Bombyliformis Cram. 400. C.

3. Verein, Coitus 3.

Bembecien, Bembeciae.

Beiderley Flügel durchsichtig; der Wanß am After fächerförmig behaart.

1375. Bembecia Hylaeiformis Lasp. Ses. 7. Apiformis Hüb. Sph. 108. 48.

1376. B. Ichneumoniformis Schiff. Verz. F. 7. Hüb. Sph. 34.

1377. B. Banchiformis. Hüb. Sph. 126.

1378. B. Empiformis Esp. Sph. 32. 1. 2. Hüb. Sph. 94.

1379. B. Tenthrediniformis Schiff. Verz. Sph. F. 6. Hüb. Sph. 52.

Fig. 17. Page 128 of Hübner's "*Verzeichniss bekannter Schmettlinge* [sic]" [1819] with the original description of the genus *Melittia*.

compared are unstudied) by the structure of the signum (relatively larger, broadly pear-shaped, entirely or mostly with numerous transverse, well-sclerotized, dentate stripes, bifurcate and ringed around base of corpus bursae posteriorly in *chalciformis* and *sangaica*).

Bionomics and habitat. Unknown.

Distribution. This species is only known from the type locality.

Material examined: 1 female (holotype), with the labels illustrated in Fig. 2 (genital preparation No. GA-088) (UMO); 1 female (Fig. 3), with the labels as in Fig. 4 (UMO).

Remarks. 1) There are two specimens, both females, in the collection studied with the type labels (Figs 2, 4). However, most probably and as appears from the original description, Westwood had at hand and described this species based on a single specimen only. Unfortunately, he did not mention about its sex. He wrote that this species has, "Expansion of the fore wings nearly 1.5 inch" and it is deposited, "In the Collection of Colonel Hearsey". Although label data indicate both of these specimens have a relation to Colonel Hearsey, we consider that in fact the type series of this species consists of only a single specimen, figured on plate 30, fig. 7. This specimen, female (Fig. 1), with the labels as in Fig. 2, we consider as the holotype. 2) We agree with the opinion of Le Cerf

(1917) and consider this species as distinctive, not conspecific with *M. chalciformis* (Fabricius, 1793).

(*Melittia sangaica sangaica* Moore, 1877)

Melittia humerosa Swinhoe (Figs 5-6, 21, 25)

Melittia humerosa Swinhoe, 1892: 38. Type locality: "North China". Holotype female (UMO).

Melittia humerosa Swinh.: Hampson, 1919: 90 (as a synonym of *M. gigantea* Moore, 1879).

Melittia humerosa Swinhoe: Dalla Torre & Strand, 1925: 144 (as a synonym of *M. gigantea* Moore, 1879).

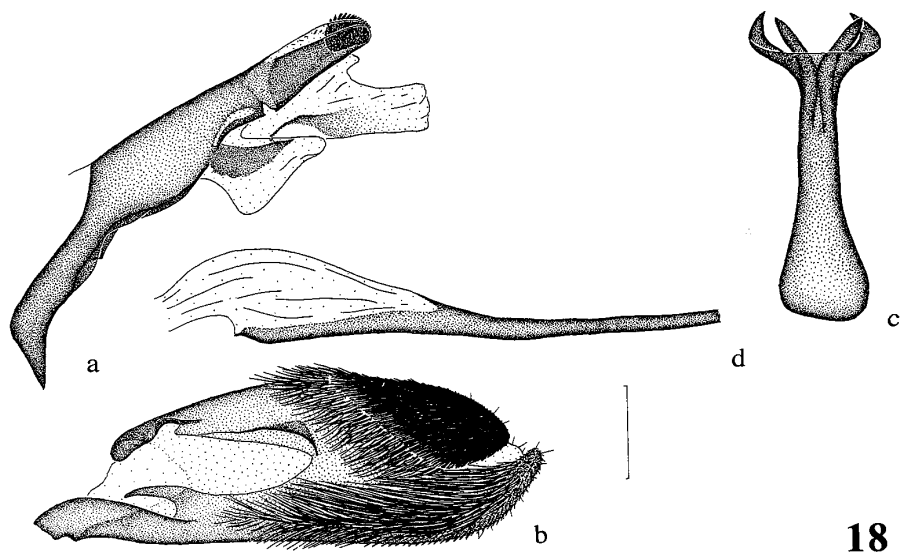
Melittia humerosa Swinhoe, 1892: Heppner & Duckworth, 1981: 26 (as a synonym of *M. gigantea* Moore, 1879).

Melittia humerosa Swinhoe, 1892: Spatenka *et al.*, 1993: 90 (as a synonym of *M. sangaica* Moore, 1877).

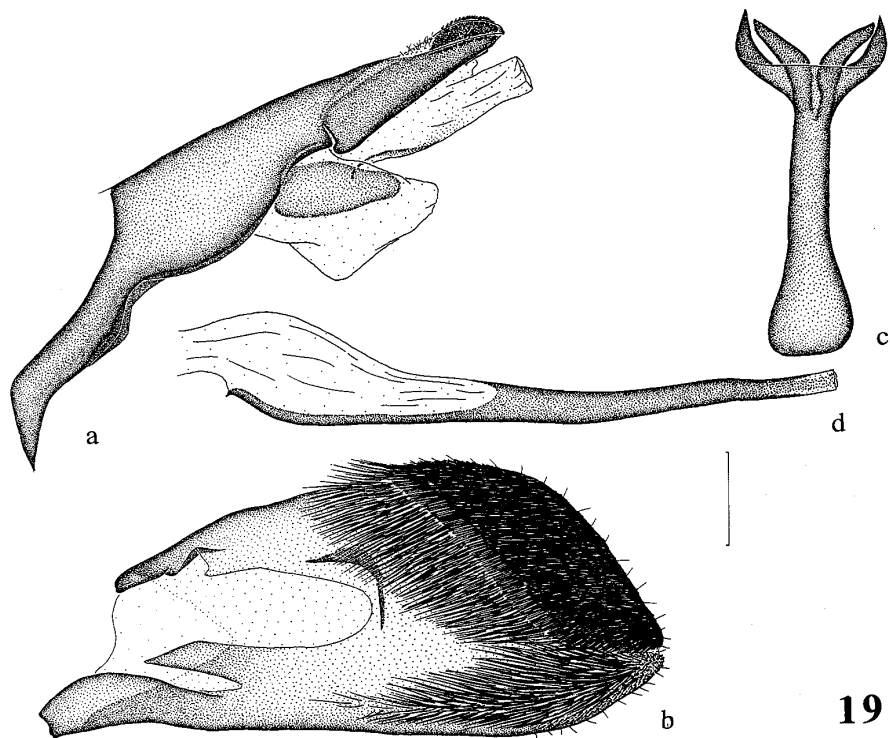
Redescription. Female (holotype) (Fig. 5). Alar expanse 39.0 mm; body length 20.5 mm; forewing 17.0 mm; antennae broken off. Head: pedicellus yellow ventrally; frons grey-brown with purplish sheen, with a yellow stripe laterally; labial palpus yellow to pale yellow with admixture of individual, thin, black scales ventro-externally; vertex grey-brown with purplish sheen, with admixture of a few, yellow, hair-like scales, with a small yellow spot at ocellus anteriorly; pericephalic hairs brown-olive dorsally and pale yellow laterally. Thorax: dorsally entirely brown-olive; thorax laterally grey with bronze-violet sheen, with a large dirty yellow to pale yellow spot medio-dorsally. Legs: fore coxa entirely yellow to pale yellow; mid tibia externally dark orange with a few black with violet sheen scales both basally and apically, with admixture of yellow scales ventro-distally and with a small snow-white with violet sheen spot medio-dorsally; spurs black with a few yellow scales; hind tibia internally entirely yellow; ventrally black with greenish and violet sheen, with two large snow-white spots with bluish sheen both at base of mid spurs and between bases of mid and apical spurs; externally dark orange with a few snow-white scales at base of mid spurs; spurs black; hind tarsus black with violet sheen, basal tarsomere mixed with dark orange and yellow scales dorsally. Abdomen: tergites 1 and 2 entirely brown-olive, each with a narrow, yellow, distal margin; tergites 3-6 black with purple-violet sheen, with admixture of individual, thin, light brown and yellow scales; tergites 3 and 4 each with a narrow yellow to pale yellow margin distally; tergite 6 with a narrow, white, distal margin; ventrally mixed with grey-brown, pale yellow and white scales; anal tuft small, entirely dark brown to black.

Forewing: basally rusty to light brownish; costal and anal margins and Cu-stem black with purplish sheen, mixed with rusty to light brownish scales; apical area black with purplish sheen, with a few snow-white and rusty scales; discal spot black with purplish sheen, with admixture of individual rusty scales, narrow, with a long, cuneiform projection proximally; transparent areas well-developed; external transparent area divided into 5 cells (cell between veins R_3 and R_{4+5} small), on level of vein M_1 nearly as broad as apical area; cilia grey-brownish with bronzed sheen. Hindwing: transparent, anal area yellow to orange; veins, discal spot and outer margin narrowly black with purplish sheen; outer margin about 4 times narrower than cilia; cilia grey-brown with bronzed sheen.

Female genitalia (holotype, genital preparation No. GA-091) (Figs 21, 25). Papillae anales slightly sclerotized, covered with relatively short setae ventrally and long setae dorsally; 8th tergite relatively broad with relatively long setae at distal margin and with a long seta at inner margin ventrally; posterior apophyses curved anteriorly, about twice shorter than anterior apophyses; latter with a long, narrow appendix baso-ventrally; ostium bursae opening near posterior margin of 7th sternite, slightly funnel-



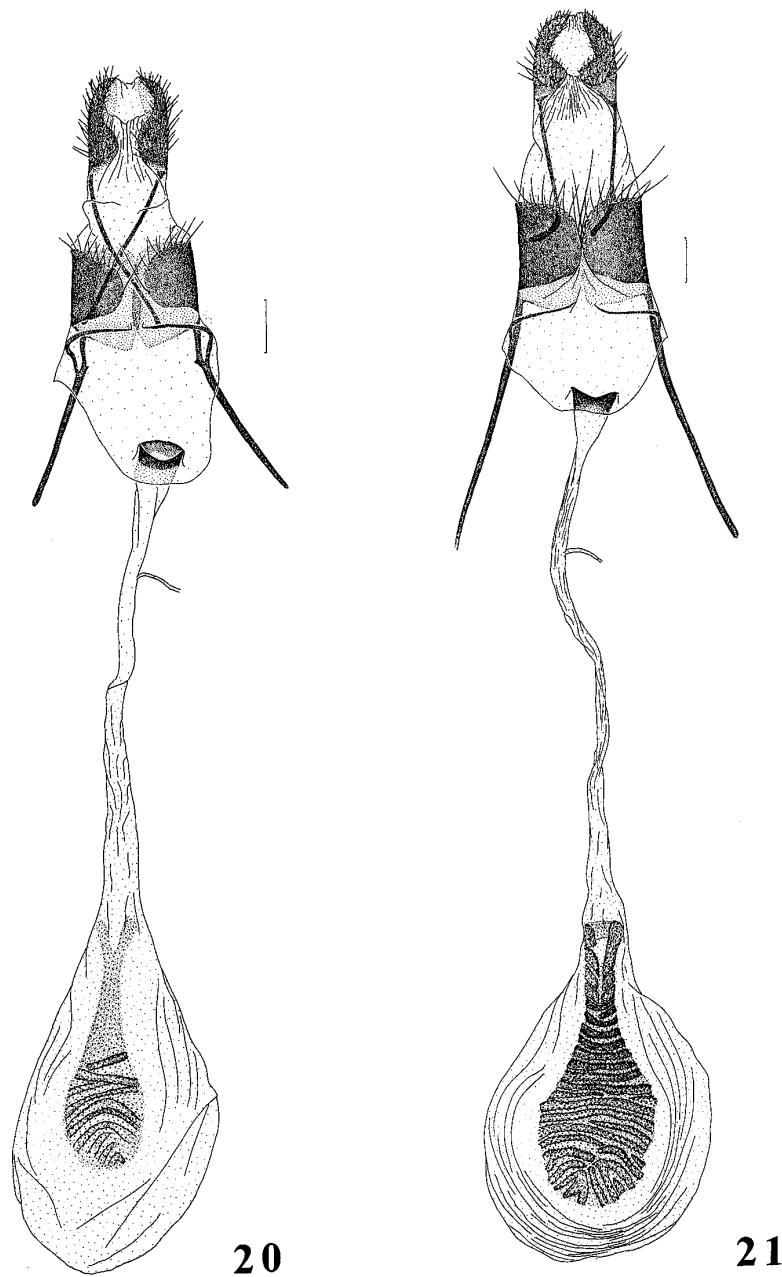
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19

Figs 18–19. Male genitalia of *Melittia* spp. 18. *M. siamica* Walker, [1865], holotype (genital preparation No. GA-087). a. Tegumen-uncus complex. b. Valva. c. Saccus. d. Aedeagus. Scale bar: 0.5 mm. 19. *M. strigipennis* Walker, [1865], holotype (genital preparation No. GA-086). a. Tegumen-uncus complex. b. Valva. c. Saccus. d. Aedeagus. Scale bar: 0.5 mm.

shaped, relatively broadly well-sclerotized; antrum narrow, membranous; ductus bursae narrow, long, membranous; corpus bursae globose to ovoid, membranous with signum relatively large, broadly pear-shaped, entirely with numerous transverse, well-sclerotized, dentate stripes, bifurcate and ringed around base of corpus bursae posteriorly (Fig. 25).

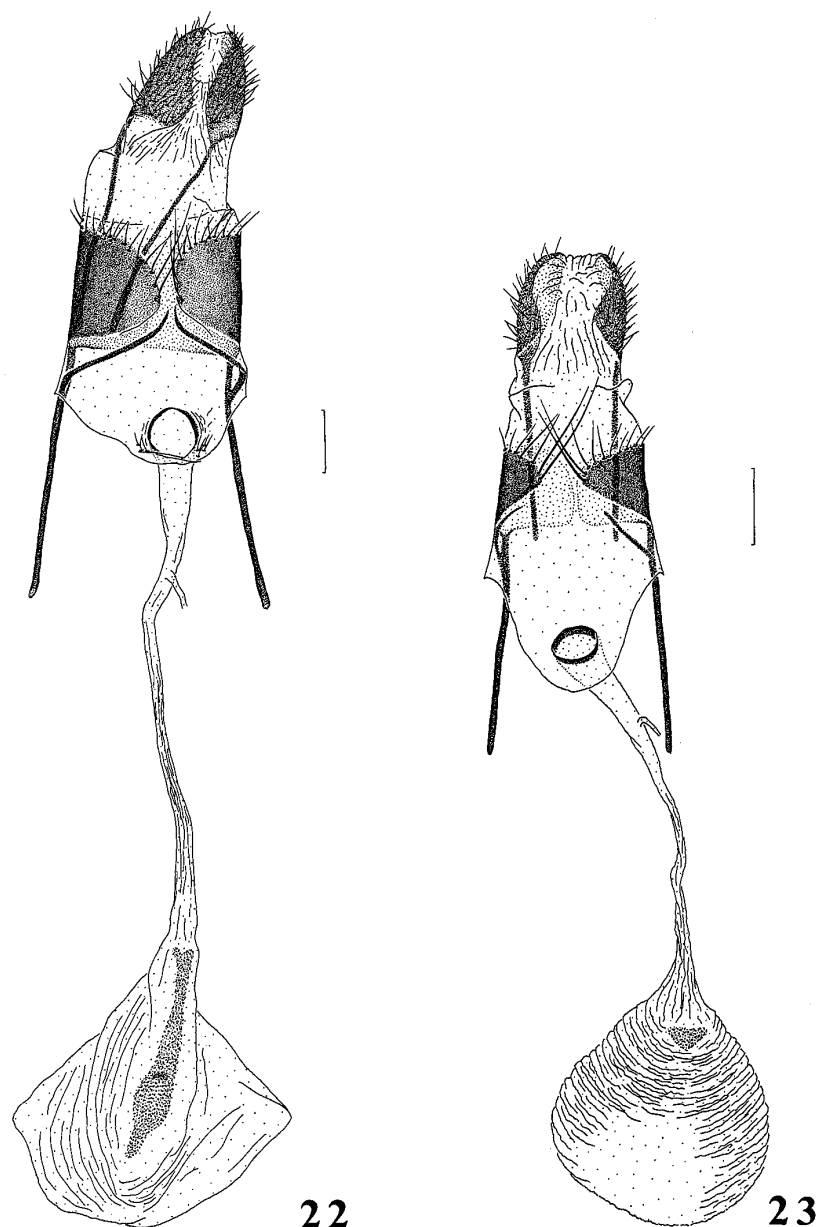


Figs 20-21. Female genitalia of *Melittia* spp. 20. *M. phorcus* (Westwood, 1848), holotype (genital preparation No. GA-088). Scale bar : 0.5 mm. 21. (*M. sangaica sangaica* Moore, 1877) = *M. humerosa* Swinhoe, 1892, holotype (genital preparation No. GA-091). Scale bar : 0.5 mm.

Male. Unknown for the nominotypical subspecies.

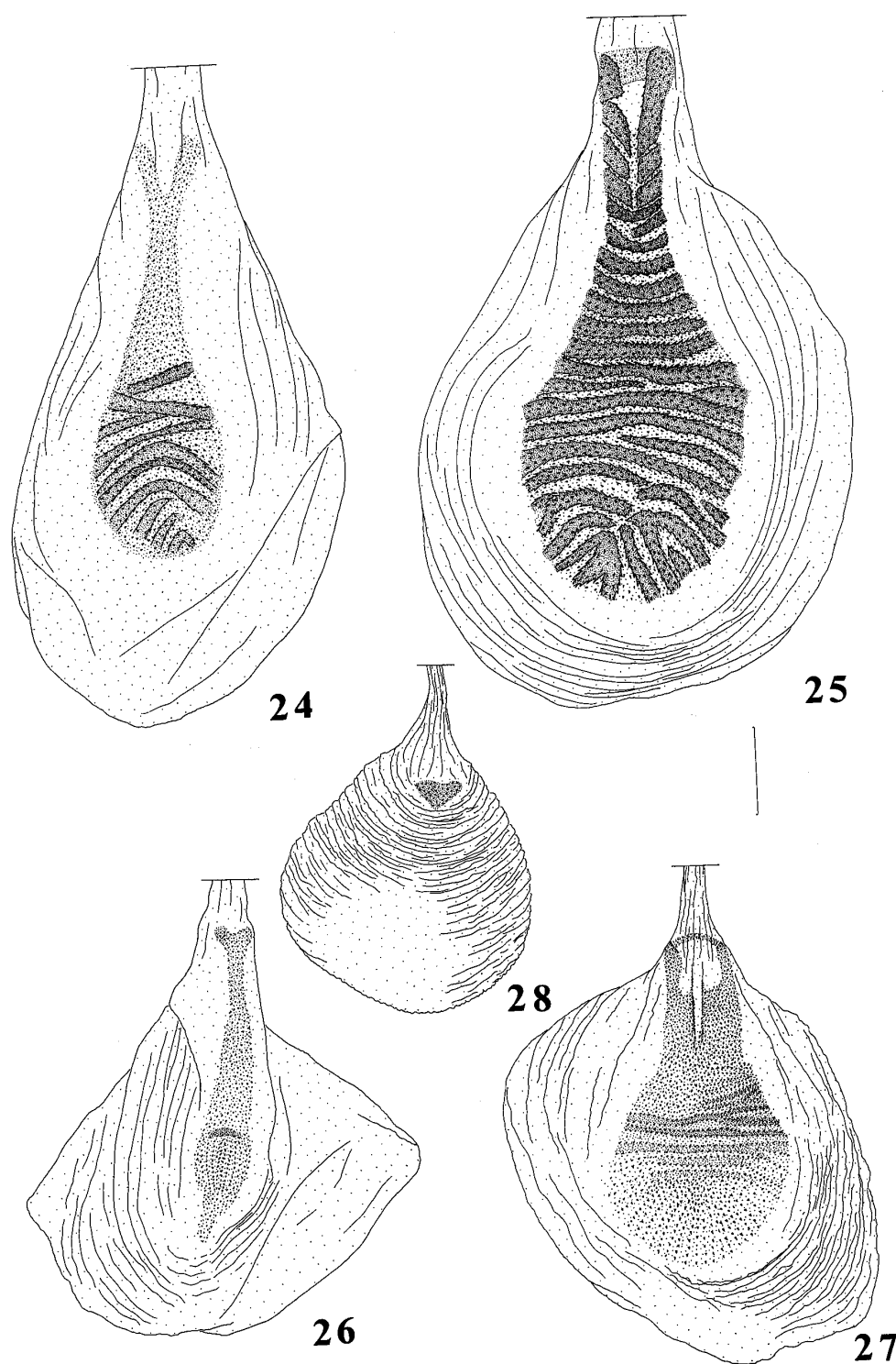
Variability. Unknown.

Diagnosis. With the previous species, *sangaica* belongs, in our opinion, to the *chalciformis* species-group and it is closest to *M. chalciformis* (Fabricius, 1793), *M. phorcus* (Westwood, 1848), *M. dichroipus* Hampson, 1919, *M. leucogaster* Hampson, 1919. From the first two species, *sangaica* can be easily distinguished by the shape of the discal spot and anterior transparent area of the forewing (discal spot with a long cuneiform projection proximally, so anterior transparent area divided by it into two longitudinal



Figs 22-23. Female genitalia of *Melittia* spp. 22. *M. rutilipes* Walker, [1865], holotype (genital preparation No. GA-092). Scale bar: 0.5 mm. 23. *M. astarte* (Westwood, 1848), holotype (genital preparation No. GA-089). Scale bar: 0.5 mm.

stripes in *chalciformis* and *phorcus*). Additionally, *sangaica* is clearly separable from *phorcus* by the shape of the signum of the female genitalia (relatively small, narrowly pear-shaped, with about 10 transverse, rather well-sclerotized, dentate stripes anteriorly, bifurcate posteriorly in *phorcus*). From *dichroipus*, *sangaica* differs in the size and shape of the external transparent area of the forewing (rounded apically, broader, about 1.7 times broader than apical area on level of vein M_1 in *dichroipus*), and in the coloration of the hind leg tuft (darker, with yellow and black, but without brown-orange or orange scales in the species compared). From *leucogaster*, it is distinguishable by the size of the external transparent area of the forewing (divided into 4 cells, small, on level of vein M_1 about thrice narrower than apical area in *leucogaster*) and coloration of the forewing (darker, with less numerous dirty orange and light brown-orange scales in *leucogaster*).



Figs 24-27. Corpus bursae of *Melittia* spp. 24. *M. phorcus* (Westwood, 1848), holotype (genital preparation No. GA-088). 25. (*M. sangaica sangaica* Moore, 1877) = *M. humerosa* Swinhoe, 1892, holotype (genital preparation No. GA-091). 26. *M. rutilipes* Walker, [1865], holotype (genital preparation No. GA-092). 27. *M. chrysogaster* Walker, [1865], holotype (genital preparation No. GA-090). 28. *M. astarte* (Westwood, 1848), holotype (genital preparation No. GA-089). Scale bar: 0.5 mm.

Bionomics and habitat. Unknown for the nominotypical subspecies from China, but well known for the subspecies *nipponica* Arita et Yata, 1987 from Japan (Arita & Yata, 1987).

Distribution. This species is known from eastern China (Shanghai) and Japan (Honshu, Shikoku, Kyushu) (ssp. *nipponica* Arita et Yata, 1987).

Material examined: 1 female (holotype), with the labels illustrated in Fig. 6 (genital preparation No. GA-091) (UMO).

***Melittia rutilipes* Walker (Figs 7-8, 22, 26)**

Melittia rutilipes Walker, [1865]: 16. Type locality: "Batchian" [=Indonesia, Molucca Islands, Bacan Island]. Holotype female (UMO).

Melittia rutilipes Wlk.: Hampson, 1919: 87.

Melittia rutilipes Walker: Dalla Torre & Strand, 1925: 148.

Melittia rutilipes Wkr.: Gaede, 1933: 788.

Melittia rutilipes Walker, [1865]: Heppner & Duckworth, 1981: 27.

Redescription. Female (holotype) (Fig. 7). Alar expanse 35.0 mm; body length 17.0 mm; forewing 15.5 mm; antenna 7.5 mm. Head: antenna dorsally black with purple-violet sheen, ventrally light brown with a few, thin, yellow scales subapically; frons grey-brown with purplish sheen, with a few orange scales laterally; labial palpus dark brown to black mixed with orange; vertex grey-brown with purplish sheen, mixed with a few, black and orange, hair-like scales; pericephalic hairs black dorsally and orange laterally. Thorax: patagium dark brown to black with violet sheen, with a small orange spot laterally; tegula dark brown to black with violet sheen, with a few orange scales both medially and apically; mesothorax dark brown to black; metathorax dark brown to black with admixture of individual, orange-yellow, hair-like scales; thorax laterally grey-brown with purple-violet sheen, with admixture of individual whitish scales. Legs: fore coxa dark brown to black with violet sheen, with a few orange scales medially; mid tibia externally black with violet sheen, with admixture of orange hair-like scales and with a large snow-white with purplish sheen spot medially; spurs mixed with black and orange scales; hind tibia externally black with a few orange scales basally, with two, large, snow-white spots with purplish sheen both medially and between bases of mid and apical spurs, and with orange scales distally; dorsally hind tibia orange with a mixture of black scales distally; spurs black basally and orange distally; hind tarsus internally and three apical tarsomeres black with purplish sheen; externally orange mixed with black medially. Abdomen: dorsally black with violet sheen, with a few rusty-orange scales on 3rd and 5th tergites; tergites 2, 4 and 6 each with a narrow, orange-yellow, distal margin; tergites 3 and 5 each with a few yellowish scales on distal margin; ventrally grey-brown with violet sheen; sternites 3-6 each with a narrow, yellow, distal margin; anal tuft small, black with yellow-orange scales distally.

Forewing: costal margin black with a narrow, longitudinal, orange line; Cu-stem and anal margin black mixed with orange; apical area orange; veins within apical area and external transparent area brown-rusty; discal spot brown-rusty, narrow, but anteriorly continuous at costal half of anterior transparent area; transparent areas small; anterior transparent area hyaline only at posterior half; external transparent area densely covered with slightly darkened, semitransparent scales, divided into 3 cells, narrow costally and broad anally; cilia grey-brown. Hindwing: transparent, anal area orange mixed with black; veins and discal spot orange; outer margin about twice as narrow as cilia, dark brown with purplish sheen, mixed with orange scales; cilia grey-brown.

Female genitalia (holotype, genital preparation No. GA-092) (Figs 22, 26). Papillae anales slightly sclerotized, covered with relatively short setae; 8th tergite relatively

broad with relatively short setae at distal margin and with two long setae at inner margin ventrally; posterior apophyses somewhat shorter than anterior apophyses; latter with a long, narrow appendix baso-ventrally; ostium bursae opening near posterior margin of 7th sternite, narrowly ring-shaped, sclerotized; antrum narrow, membranous; ductus bursae narrow, relatively long, membranous; corpus bursae globose, membranous with signum relatively small, narrow, slightly sclerotized, with numerous well-sclerotized thorns, slightly bifurcate posteriorly (Fig. 26).

Male. Unknown.

Variability. The second female specimen we examined has a larger external transparent area of the forewing, which is divided into 5-6 cells and on the level of vein M_1 about 2.5 times broader than apical area; the outer margin of the hindwing is narrower.

Diagnosis. The exact systematic position of this species among the Oriental congeners is unclear. From the shape of the discal spot and anterior transparent area of the forewing, *rutilipes* is perhaps closest to *Desmopoda bombiformis* Felder, 1874 (it is quite possible that *Desmopoda* is a synonym of *Melittia*) but can be separated by the somewhat smaller size (alar expanse 44.0 mm in *bombiformis*) and coloration of the hind leg tuft (with orange, yellow and brown-orange scales in the species compared) and forewing (without orange or brown-rusty scales in *bombiformis*). From *M. moluccaensis* Hampson, 1919, it differs in the background coloration of the hind leg (darker in *moluccaensis*) and forewing (darker, without orange or brown-rusty scales in the species compared). From all other Oriental *Melittia*, *rutilipes* can be easily separated by the structure of the forewing (form of the discal spot and anterior transparent area). Besides that, *rutilipes* has distinct signum in the female genitalia (relatively small, narrow, slightly sclerotized, with numerous well-sclerotized thorns, slightly bifurcate posteriorly (Fig. 26)).

Bionomics. The host plant unknown. The specimens from Ambon Island was netted in February.

Habitat. Unknown.

Distribution. Known only from the islands of Bacan and Ambon, Molucca Is, Indonesia.

Material examined: 1 female (holotype), with the labels illustrated in Fig. 8 (genital preparation No. GA-092) (UMO); 1 female, "Amboina, Feb. 1892, W. Doherty" (BMNH).

***Melittia siamica* Walker (Figs 9-10, 18)**

Melittia siamica Walker, [1865]: 18. Type locality: "Siam" [=Thailand]. Holotype male (UMO).

Melittia siamica Wlk.: Hampson, 1919: 88.

Melittia siamica Walker: Dalla Torre & Strand, 1925: 148.

Melittia siamica Wkr.: Gaede, 1933: 789, pl. 95, row e.

Melittia siamica Walker, [1865]: Heppner & Duckworth, 1981: 27.

Redescription. Male (holotype) (Fig. 9). Alar expanse 26.0 mm; body length 13.3 mm; forewing 11.0 mm; antenna 7.0 mm. Head: antenna dorsally black with purplish sheen (scales lost apically), with a few thin, white scales, ventrally light brown mixed with thin yellow scales, more densely subapically; pedicellus yellow ventrally; frons grey-brown with purplish sheen, with a pale yellow to white stripe laterally; labial palpus white basally, two apical joints lost; vertex grey-brown with admixture of black and yellowish hair-like scales; pericephalic hairs olive-green mixed with black dorsally and pale yellow to white laterally. Thorax: patagium dorsally dark brown with greenish sheen, anteriorly with olive-green scales, laterally pale yellow to white; tegula grey-brown with purplish sheen, densely covered with olive-green scales; scales of meso- and

metathorax nearly lost, but anteriorly grey-brown with purplish sheen, covered with thin olive-green scales; thorax laterally mixed with grey with bluish sheen and snow-white scales. Legs: fore coxa white mixed with dark brown, with pale yellow and black hair-like scales basally; mid tibia externally mixed with yellow, light brown and white scales, with a small snow-white spot with blue sheen medially; mid tarsus black with two snow-white spots with blue sheen both basally at first and third tarsomeres; spurs black; hind legs broken off. Abdomen: nearly without scales, retained ones dark brown to black with violet sheen; each tergite with a narrow, pale yellow, distal margin; ventrally grey-brown mixed with pale yellow to white; anal tuft small, black mixed with snow-white scales with blue sheen laterally and distally.

Forewing: dark brown to black, basally with admixture of olive-yellow scales; apical area with individual snow-white scales with purplish sheen; transparent areas well-developed; external transparent area relatively large, narrowed costally, divided into 5 cells, on level of vein M_1 about 1.6 times as narrow as apical area and about twice as broad as discal spot; discal spot with a large, cuneiform projection proximally; cilia grey-brown with bronzed sheen. Hindwing: transparent, anal area dark brown mixed with pale yellow, whitish and yellow scales; veins, discal spot and outer margin dark brown with bronze-violet sheen; discal spot narrow, cuneiform; outer margin about twice as narrow as cilia; grey-brown with bronzed sheen.

Male genitalia (holotype, genital preparation No. GA-087) (Fig. 18). Tegumen-uncus complex relatively narrow; uncus bilobed distally with a relatively large oval plate of strong pointed setae internally on each side; gnathos rather large, broad, membranous, with well-sclerotized semi-oval, apically pointed plate (Fig. 18a); valva (Fig. 18b) elongate-oval; distal field of setae slightly separated from medial one; setae of medial field relatively short, not reaching pocket-shaped crista; ventral lobe relatively broad and long, only slightly exceeding distal margin; pocket-shaped crista relatively broad with longitudinal costal part; saccus broad, mace-shaped, but nearly flat basally (Fig. 18c); aedeagus (Fig. 18d) narrow, slightly shorter than valva; vesica with numerous minute cornuti.

Female. Unknown.

Variability. Unknown.

Diagnosis. This species seems to be closest to *M. gorochovi* Gorbunov, 1988, *M. newara* Moore, 1879, *M. callosoma* Hampson, 1910, *M. indica* Butler, 1874, *M. kulluana* Moore, 1888, *M. proxima* Le Cerf, 1917 and *M. staudingeri* Boisduval, [1875]. From the first species compared, *siamica* differs in the somewhat smaller size (about 30.0 mm in *gorochovi*), in the coloration of the thorax laterally (mixed with grey-brown with violet sheen, pale yellow and yellow-olive scales in *gorochovi*), abdomen ventrally (entirely pale yellow in the species compared), and anal area of the hindwing (black with violet sheen, densely covered with yellow-olive scales and hairs in *gorochovi*), and in the shape of the external transparent area of the forewing (relatively large, divided into 5-6 cells, on level of vein M_1 about 2.5 times as broad as discal spot and about 1.5 times as broad as apical area in the species compared). Also, these two species can be separated by certain details of the male genitalia (gnathos relatively larger, but less sclerotized; valva relatively narrower and longer; pocket-shaped crista less developed; aedeagus slightly longer than valva in *gorochovi*). From *newara*, *kulluana* and *staudingeri*, *siamica* is distinguishable, in addition to several details of the background coloration, by the form of the external transparent area (extremely broad and divided into 5-7 cells in these species compared). From *callosoma*, this species can be separated by the relative size of the external transparent area of the forewing (on level of vein M_1 external transparent

area slightly broader than apical area and about twice as broad as discal spot in *callosoma*) and by the structure of the male genitalia (gnathos relatively larger and more sclerotized; valva broadly trapeziform; saccus relatively narrow in *callosoma*). From *indica*, *siamica* is distinguishable by the darker coloration of the thorax (bright brown-orange in *indica*) and anal area of the hindwing (dark brown to black with admixture of individual white scales with blue-green sheen in the species compared). From *proxima*, *siamica* clearly differs in the shape of the discal spot of the forewing (with a short cuneiform projection proximally in *proxima*) and in the coloration of the anal area of the hindwing (densely covered with white with bright silver-green sheen in *proxima*).

Bionomics and habitat. Unknown.

Distribution. This species is known only from the type locality, Thailand.

Material examined: 1 male (holotype), with the labels illustrated in Fig. 10 (genital preparation No. GA-087) (UMO).

***Melittia chrysogaster* Walker (Figs 11-12, 27)**

Melittia chrysogaster Walker, [1865]: 16. Type locality: "Celebes" [=Indonesia, Sulawesi Island].

Holotype female (UMO).

Melittia chrysogaster Wlk.: Hampson, 1919: 87.

Melittia chrysogaster Walker: Dalla Tore & Strand, 1925: 140.

Melittia chrysogaster Wkr.: Gaede, 1933, 788.

Melittia chrysogaster Walker, [1865]: Heppner & Duckworth, 1981: 26.

Redescription. Female (holotype) (Fig. 11). Alar expanse 35.0 mm; body length 17.2 mm; forewing 15.0 mm; antenna 8.5 mm. Head: antenna dorsally black with a few white scales with bluish sheen, ventrally light brown with admixture of thin yellow scales; pedicellus white ventrally; frons grey-brown with purplish sheen, with a white stripe laterally; labial palpus basally white, dorsally dark brown, ventrally white with two narrow, longitudinal, black stripes; vertex grey-brown with purplish sheen, with a small white spot at ocellus anteriorly; pericephalic hairs black dorsally and white laterally. Thorax: patagium dark brown to black with purple-violet sheen, mixed with light rusty-brown scales; tegula dark brown with a few rusty-brown scales; mesothorax dark brown to grey-brown; metathorax grey-brown mixed with white hair-like scales. Legs: fore coxa white mixed with black; mid tibia black with a small white spot with bluish hue at base of spurs externally and with a few rusty-brown scales dorsally; hind legs broken off. Abdomen: dorsally entirely brick-orange (scales medially lost); ventrally entirely pale yellow with orange hue.

Forewing: black with slight purplish sheen, with a few rusty scales basally; transparent areas well-developed; external transparent area small, divided into 3 cells, on level of vein M_1 nearly as narrow as discal spot and about 3.5 times narrower than apical area; discal spot narrow with a minute cuneiform projection proximally; cilia dark brown. Hindwing: transparent, anal area black covered with dark orange hair-like and a few whitish scales; veins, discal spot and outer margin narrowly black; outer margin about twice narrower than cilia; cilia dark brown.

Female genitalia (holotype, genital preparation No. GA-090) (Fig. 27). Unfortunately, the inside of abdomen of this specimen examined has been eaten by insects (larvae of Dermestidae?). We observed that the bitten of corpus bursae was protruding through a hole in abdomen. So, we describe only that part of the female genitalia. Corpus bursae globose to ovoid, membranous with signum relatively large, broadly pear-shaped, with a few transverse, slightly sclerotized, dentate stripes medially, bifurcate and ringed around

base of corpus bursae posteriorly (Fig. 27).

Male. Unknown.

Variability. Unknown.

Diagnosis. The systematic position of this species is not so clear, but more likely it belongs to the *amboinensis* species-group. It is probably closest to *M. batchiana* Le Cerf, 1917, from which *chrysogaster* can be distinguished by the background coloration of the abdomen (tergites 2-4, 6, 7 each with a broad black band in *batchiana*), by the shape of the discal spot (with a distinct, narrow, cuneiform projection proximally in *batchiana*) and the external transparent area of the forewing (divided into 4 cells in the species compared). From other species of the *amboinensis* species-group, viz. *M. amboinensis* Felder, 1861, *M. nepcha* Moore, 1879, *M. congruens* Swinhoe, 1890, *M. dorsatiformis* Hampson, 1891, *M. distincta* Le Cerf, 1916 and taxonomically unclear taxa described by Le Cerf (1916) (*meeki*, *celebica*, *javana*, *doddi*), *chrysogaster* clearly differs in the entirely brick-orange abdomen dorsally (with more or less numerous black scales in all these species compared) and, especially, in the smaller size of the external transparent area of the forewing (larger and divided into 5-7 cells in all species of the *amboinensis* species-group).

Bionomics and habitat. Unknown.

Distribution. Known only from the type locality, Indonesia, Sulawesi I.

Material examined: 1 female (holotype), with the labels illustrated in Fig. 12 (genital preparation No. GA-090) (UMO).

***Melittia strigipennis* Walker, sp. rev. (Figs 13-14, 19)**

Melittia strigipennis Walker, [1865]: 17. Type locality: "Gilolo" [=Indonesia, Halmahera Island]. Holotype male (UMO).

Melittia strigipennis Walk.: Hampson, [1893]: 203 (as a synonym of *M. eurytion* (Westwood, 1848)).

Melittia strigipennis Wlk.: Hampson, 1919: 92 (as a synonym of *M. eurytion* (Westwood, 1848)).

Melittia strigipennis Walker: Dalla Torre & Strand, 1925: 143 (as a synonym of *M. eurytion* (Westwood, 1848)).

Melittia strigipennis Wkr.: Gaede, 1933: 790 (as a synonym of *M. eurytion* (Westwood, 1848)).

Melittia strigipennis Walker, [1865]: Heppner & Duckworth, 1981: 26 (as a synonym of *M. eurytion* (Westwood, 1848)).

Melittia strigipennis Walker, [1865]: Spatenka *et al.*, 1993: 89 (as a synonym of *M. eurytion* (Westwood, 1848)).

Redescription. Male (holotype) (Fig. 13). Alar expanse 35.0 mm; body length 19.0 mm; forewing 14.5 mm; antenna 8.0 mm. Head: antenna dorsally black with purplish sheen, with a few snow-white scales, ventrally brown to light brown with a few yellow scales; pedicellus white ventrally; frons brown with purplish sheen, with a few white scales laterally; labial palpus black with three narrow, longitudinal, white lines externally, internally and ventrally; vertex black with a few yellow scales; pericephalic hairs black. Thorax: patagium dark brown with green-violet sheen, with a few, thin, light brown scales anteriorly and with a few white scales laterally; tegula dark brown to black, densely covered with thin olive-brown scales; meso- and metathorax dark brown to black; thorax laterally grey-brown with a few white scales. Legs: fore coxa dark brown to black with a few thin white scales at base and a few broad white scales apically; mid tibia externally black with green-violet sheen, with a sparse white spot with bluish sheen medially and with a few rusty and white scales apically; hind tibia externally dark brown to black with green-violet sheen, with two small, white spots with

bluish hue both somewhat near base of mid spurs and between bases of mid and apical spurs, and with admixture of individual, thin, white scales dorso-externally at base of mid spurs; hind tarsus dark brown to black with green-violet sheen, with a few white scales medio-externally; spurs black, an apico-external spur mixed with white. Abdomen: dorsally black with violet sheen, with a few white scales on 5th tergite; tergite 2 with a narrow, white, distal margin laterally; ventrally entirely white; anal tuft small, dark brown with a few white scales laterally and ventrally.

Forewing: entirely dark brown to black with purple sheen, with admixture of individual snow-white scales with bluish sheen on apical area, Cu-stem and at base; transparent areas poorly developed; anterior transparent area short, divided by a narrow, cuneiform, proximal projection of discal spot into two longitudinal hyaline cells; external transparent area small, narrowed costally, divided into 4 cells, on level of vein M_2 about 3.5 times as narrow as apical area and twice as narrow as discal spot; cilia dark brown with violet sheen. Hindwing: transparent, anal area black with a few whitish scales; veins, discal spot and outer margin black with purple-violet sheen; discal spot narrow; outer margin narrow, about twice narrower than cilia; cilia dark brown with violet sheen.

Male genitalia (holotype, genital preparation No. GA-086) (Fig. 19). Tegumen-uncus complex relatively broad; uncus bilobed distally with a small semi-oval plate of strong pointed setae internally on each side; gnathos rather large, broad, membranous with slightly sclerotized oval plate medially (Fig. 19a); valva (Fig. 19b) broad, trapeziform; distal field of setae slightly separated from medial one; setae of medial field long, slightly covering pocket-shaped crista; ventral lobe relatively broad and short, not exceeding distal margin; pocket-shaped crista large with longitudinal distal part; saccus narrow, mace-shaped, but nearly flat basally (Fig. 19c); aedeagus (Fig. 19d) narrow, nearly as long as valva; vesica with numerous minute cornuti.

Female. Unknown.

Variability. Unknown.

Diagnosis. This species belongs to the *eurytion* species-group and seems to be closest to *M. eurytion* (Westwood, 1848) and *M. formosana* Matsumura, 1911. From the first species, under which *strigipennis* was always cited as a synonym, it can be distinguished by the coloration of the anal area of the hindwing (black, but densely covered with light bluish or bright blue scales in *eurytion*) and, more importantly, by some details of the male genitalia (gnathos relatively large, broad, with large, bilobed distally, sclerotized plate medially; pedunculus sometimes with a few setae; valva clearly cut trapeziform in *eurytion*). However, it should be remembered that *M. eurytion* is a highly variable species externally and in the structure of the male genitalia internally. Of course, it cannot be dismissed that the taxon *eurytion*, in the present sense, is possibly a complex of closely related species. From *formosana*, *strigipennis* differs in the coloration of the anal area of the fore- and hindwings (bright blue in *formosana*), less developed transparent areas of the forewing (external transparent area usually divided into 4-5 cells, nearly as broad as apical area on level of vein M_2 in *formosana*) and in the male genitalia (valva short, oval; distal and medial fields of setae barely separated; saccus narrower in the species compared). From *M. chalybescens* Miskin, 1892, *strigipennis* is distinguished by the coloration of the anal area of the both wings (bright blue-green in *chalybescens*) and by the male genitalia (valva broadly oval; saccus bilobed basally in *chalybescens*). From *M. flaviventris* Hampson, 1919, this species can be easily separated by the shape of the anterior and external transparent areas of the forewing (anterior transparent area not divided into two longitudinal stripes by proximal projection of discal spot; external

transparent area divided into 5-6 cells, about 1.8 times as broad as apical area on level of vein M_2 in *flaviventris*). From *M. volatilis* Swinhoe, 1890, *strigipennis* clearly differs in the more well-developed transparent areas of the forewing (anterior transparent area very short and narrow; external transparent area reduced into one small cell between veins M_3 - Cu_1 in *volatilis*).

Bionomics and habitat. Unknown.

Distribution. This species is known only from the type locality, Indonesia, Halmahera I.

Material examined: 1 male (holotype), with the labels illustrated in Fig. 14 (genital preparation No. GA-086) (UMO).

***Melittia astarte* (Westwood) (Figs 15-16, 23, 28)**

Trochilium astarte Westwood, 1848: 61, pl. 30, fig. 4. Type locality: "Central India". Holotype female (UMO).

Melittia astarte Westw.: Hampson, 1919: 94.

Melittia astarte Westwood: Dalla Torre & Strand, 1925: 138.

Melittia astarte Ww.: Gaede, 1933: 791.

Melittia astarte (Westwood, 1848): Heppner & Duckworth, 1981: 26.

Redescription. Female (holotype) (Fig. 15). Alar expanse 25.5 mm; body length 13.8 mm; forewing 11.2 mm; antenna 5.8 mm. Head: antenna dark brown to black with purplish sheen, with admixture of snow-white scales with bluish hue, more densely dorso-subapically; frons grey-brown mixed with dirty whitish scales; labial palpus orange to pale orange; vertex orange; pericephalic hairs orange. Thorax: patagium dark brown mixed with rusty scales anteriorly; tegula dark brown densely covered with rusty scales; scales of meso- and metathorax lost; thorax laterally dark brown. Legs: fore coxa entirely orange; hind tibia and tarsus internally and apical tarsomere externally dark brown to black with violet sheen; externally hind tibia and four basal tarsomeres orange with a small white spot somewhat near base of mid spurs; spurs dark brown to black, both external spurs with a small, distal, white spot internally. Abdomen: dorsally dark brown to black with greenish sheen; tergite 1 densely covered with thin, hair-like, dark orange scales; tergites 4 and 5 each with a narrow, grey-brown with greenish sheen, distal margin; ventrally dark brown; distal margin of 4th and 5th sternites with a few whitish scales; anal tuft small, entirely orange.

Forewing: entirely opaque, black with bright green sheen and with violet sheen narrowly at apical margin, with a few individual whitish and yellowish scales medially; cilia entirely dark yellow. Hindwing: transparent, anal area orange to dirty yellow; veins broadly orange to dark yellow with a few black with violet sheen scales distally; discal spot relatively broad, cuneiform, orange; outer margin relatively broad, about 1.5 times as narrow as cilia, dark yellow proximally and black with violet sheen distally; costal margin broadly dirty yellow; cilia long, entirely dirty yellow.

Female genitalia (holotype, genital preparation No. GA-089) (Figs 23, 28). Papillae anales slightly sclerotized, covered with relatively short setae; 8th tergite relatively narrow, ventrally triangular, with relatively short setae at distal margin and with two long setae at inner margin ventrally; posterior apophyses somewhat shorter than anterior apophyses, the latter being with a long, narrow appendix baso-ventrally; ostium bursae opening near posterior margin of 7th sternite, slightly funnel-shaped, narrowly well-sclerotized; antrum narrow, membranous; ductus bursae narrow, long, membranous; corpus bursae globose, membranous with signum small, cardiform, with numerous, well-sclerotized thorns (Fig. 28).

Male. Unknown.

Variability. Unknown.

Diagnosis. Superficially, *M. astarte* is unique among the Oriental *Melittia* species and it seems to be closest to some Afrotropical *Melittia* ones (*M. abyssiniensis* Hampson, 1919, *M. ectothyris* Hampson, 1919, *M. houlberti* Le Cerf, 1917, etc.) and *M. gephyra* Gaede, 1933 from the Middle East (Palearctic region). From the last species, *astarte* is easily distinguishable by the coloration of the hindwing (entirely opaque, dark brown with bright blue sheen in *gephyra*), cilia of the both wings (dark brown to black in the species compared), and hind leg tuft (entirely black with blue sheen in *gephyra*). From *abyssiniensis* and *houlberti*, *astarte* clearly differs in the coloration of the cilia of both wings (dark brown to black in *abyssiniensis* and *houlberti*) and hindwing (entirely opaque blue in *houlberti* and blue with black basal third in *abyssiniensis*). From *ectothyris*, *astarte* can be separated also by the coloration of the both wings cilia (dark brown to black in *ectothyris*), forewing (entirely opaque dark brown to black, densely dusted by ochreous scales in *ectothyris*), and hindwing (basal half opaque black with blue sheen in the species compared).

Bionomics and habitat. Unknown.

Distribution. Known only from the type locality, India.

Material examined: 1 female (holotype), with the labels illustrated in Fig. 16 (genital preparation No. GA-089) (UMO).

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摘 要

英国オックスフォード大学のホープ昆虫コレクションに保存されている *Melittia* 属 (鱗翅目, スカシバガ科) のタイプ標本の再検討 (有田 豊・Oleg G. Gorbunov)

本報告はイギリス, オックスフォード大学博物館に保存されているホープ昆虫コレクションの中の東洋区からもたらされたスカシバガ科の *Melittia* 属の7種のタイプ標本を再検討したものである。これらの内 *chrysogaster*, *rutilipes*, *siamica*, *strigipennis* の4種類は Walker によって, *astarte* と *phorcus* の2種は Westwood によって, また *humerosa* は Swinhoe によって記載されたものである。これら7種のタイプ標本とゲニタリアを図示し, 再記載して種名を検討した。

Melittia phorcus (Westwood) (Figs 1-4, 20, 24)

インド中部からの1♀の標本によって記載された。♂は知られていない。 *M. chalciformis* (Fabricius), *M. dichroipus* Hampson, *M. leucogaster* Hampson, *M. notabilis* Swinhoe, *M. sangaica* Moore などに外見は似ているが, 中室外方透明紋の大きさや後脚脛節の毛束の色彩などで区別される。

M. humerosa Swinhoe (Figs 5-6, 21, 25)

“North China” から1♀で記載された本種は, すでに中国上海から記載された *Melittia sangaica* Moore, 1877 のシノニムとされた (Spatenka *et al.*, 1993)。今回タイプ標本のゲニタリアを精査したところ *sangaica* とよく一致した。この種は本邦にも別亜種 *nipponica* が産することが知られている。

M. rutilipes Walker (Figs 7-8, 22, 26)

ウォーレスによって採集された標本のように “Batchian” のラベルとともに “Wallace” のラベルがある。外見からは *Desmopoda bombiformis* Felder や *M. moluccaensis* Hampson に似ているが明らかに後脚脛節の毛束の色彩が異なる。

M. siamica Walker (Figs 9-10, 18)

Siam (タイ) で得られた1♂によって記載されたやや小型の *Melittia* である。東洋区に分布している *M. gorochovi* Gorbunov, *M. newara* Moore, *M. callosoma* Hampson, *M. indica* Butler, *M. kulluana* Moore, *M. proxima* Le Cerf, *M. staudingeri* Boisduval などに外見が非常に良く似ているがいずれの種類からも中室外方透明紋の形, 胸部背面の色彩, 後脚脛節の毛束の色彩, 腹部腹面にある細い帯などで区別される。

M. chrysogaster Walker (Figs 11-12, 27)

スラウェシ島の1♀によって記載された。 *M. batchiana* Le Cerf に最も良く似ているが, 中室外方透明紋や腹部腹面の色彩が異なる。

M. strigipennis Walker, sp. rev. (Figs 13-14, 19)

インドネシアの Gilolo 島 (Halmahera 島) で得られた (“Wallace” のラベルがある) 1♂によって記載された本種はその色彩から *M. eurytion* のシノニムとされていた。今回, 本種のタイプ標本のゲニタリアを精査したところ *M. eurytion* と異なることが判明したので, 種 *strigipennis* を有効名

として復活させた.

M. astarte (Westwood) (Figs 15-16, 23, 28)

インド中部で得られた 1 ♀によって記載された本種は前翅に透明な部分がなく、完全に鱗粉に覆われており、東洋区の *Melittia* 属としては大変ユニークな種である。おそらく中東 (旧北区) の *M. gephyra* Gaede や熱帯アフリカ (エチオピア区) の *M. abyssiniensis* Hampson, *M. ectothyris* Hampson, *M. houlberti* Le Cerf などに近縁な種類であると思われる。

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